



EdTech Tulna Drives Informed Decision-Making by Governments: Case from Haryana



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September 2022

The Indian EdTech market is riding the wave of technological innovation and rapid growth, with nearly 10,000 products¹ in the market today, adding to the enormous variety of solutions available in terms of intended goals, target audience, technology used, features available, and cost. Furthermore, these solutions cater to different use-cases or needs of stakeholders in the teaching and learning process, increasing the complexity and challenge for selecting EdTech products.



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School closures during the pandemic put-in-motion a significant uptake of EdTech, both by retail users such as private schools and parents, and by governments for the public school systems in India. State governments in India, adopted EdTech for large-scale programs, encompassing thousands of schools, teachers and students; these are therefore bold bets made by them on EdTech softwares. Hence, one of the key questions at this point has moved beyond whether or not to use EdTech, but to selecting the right EdTech software that is fit for context and purpose, and determining ways to adopt it at scale.

Use of EdTech by governments and the challenge of selection

State governments in India are backed by national mandates to implement EdTech, for example, schemes like digital initiatives under Samagra Siksha and the National Education Policy 2020 which lays emphasis on leveraging technology for learning. Additionally, states may also make independent provisions for such programs or come together with multilateral institutions to strategize and devise EdTech programs to support teaching and learning. Over the last two years, several governments including Andhra Pradesh, Madhya Pradesh, and Haryana have initiated large-scale learning EdTech programs. As part of provisions made for EdTech initiatives under national schemes, for FY 2022-23, more than 24 states in India have indicated an inclination to integrate some form of EdTech across ~98,000 schools committing to spend more than USD 470 million².

For an EdTech program, the government needs to bring together three things: hardware (devices such as tablets, computers.), software (learning solutions), and ancillary infrastructure and services (connectivity, electricity, program management support). Hardware being the most capital-intensive element, drives this decision-making process, reducing the focus put on the selection of learning software. Additionally, in the absence of any standards for quality of learning software, governments have limited understanding or support to build a robust approach for technical evaluation of software. Furthermore, the complexity of the EdTech landscape exacerbated by a dearth of information and evidence about efficacy and quality of these solutions, makes it challenging for decision makers to select the right EdTech solution for adoption at scale.

Tulna's approach for government decision makers

To support governments in the process of selecting the right learning software, [EdTech Tulna](#) facilitates decision-makers to select software based on quality of the product design. EdTech Tulna builds research-based quality standards that define 'what good looks like'. These standards exist along three core pillars (i) Content quality (ii) Pedagogical alignment (iii) Technology and design, to have a common language and understanding around the quality of EdTech solutions. To translate these standards to practice, Tulna creates contextualized toolkits comprising rubrics, reviewer guidelines, and illustrations, with accompanying training that builds institutional capacity within governments, enabling them to conduct evaluations of EdTech solutions for making high-stakes decisions.

By adopting Tulna offerings, governments can build institutional knowledge and capacity for consistently selecting quality learning solutions which can be critical in the achievement of better learning outcomes of students.

Haryana's focus on EdTech

“We wanted to ensure that only the best quality solutions are provided to our students. The EdTech Tulna toolkit helped us conduct rigorous evaluations to identify best-in-class solutions. The EdTech Tulna team has been very supportive throughout the process and we appreciate their cooperation.”

- Dr. J. Ganesan,
Former Director Secondary Education, Haryana

In 2021, the Government of Haryana (GoH) embarked on an ambitious initiative to digitally empower public school students in Grades 10-12, by providing individual tablet devices with free internet data up to 2 GB per day per student. While enabling access to internet-enabled devices for each of the 5 Lakh students is in itself a powerful concept, the department decided to provide these devices with Personalized Adaptive Learning (PAL) software and content for truly transformational impact. Fuelled by the learning deficit caused due the pandemic, and the inability of many low-tech e-learning platforms to provide structured learning, the government made a calculated decision to adopt PAL technology that can support and drive the ‘catch-up’ process in both, remote learning as well as blended learning environments. PAL was chosen as the EdTech modality of choice given the evidence of efficacy in resource limited settings³.

The outlined objectives of this initiative (Tablet + PAL solution + internet connectivity) were as follows :

1. Bridging the digital device access gap;
2. Providing students with learning content and remedial practice exercises, tailored to their learning levels;
3. Bringing focus to competency attainment by providing digital assessments;
4. Providing detailed monitoring data to track student progress and encourage engagement

GoH rightly recognized the central role of the learning software towards achievement of the underlying program objectives for improved learning outcomes of students. Hence, it became imperative to focus on selection of the right learning software for the USD 80 Mn learning program. The two big wins for the ecosystem on this end were:

1. Investment made in adopting an evidence-backed and robust learning technology like PAL;
2. Independent and robust selection process to select a quality PAL solution.

Haryana became the first state in India to use EdTech Tulna for EdTech adoption

GoH made the following key decisions in this direction:

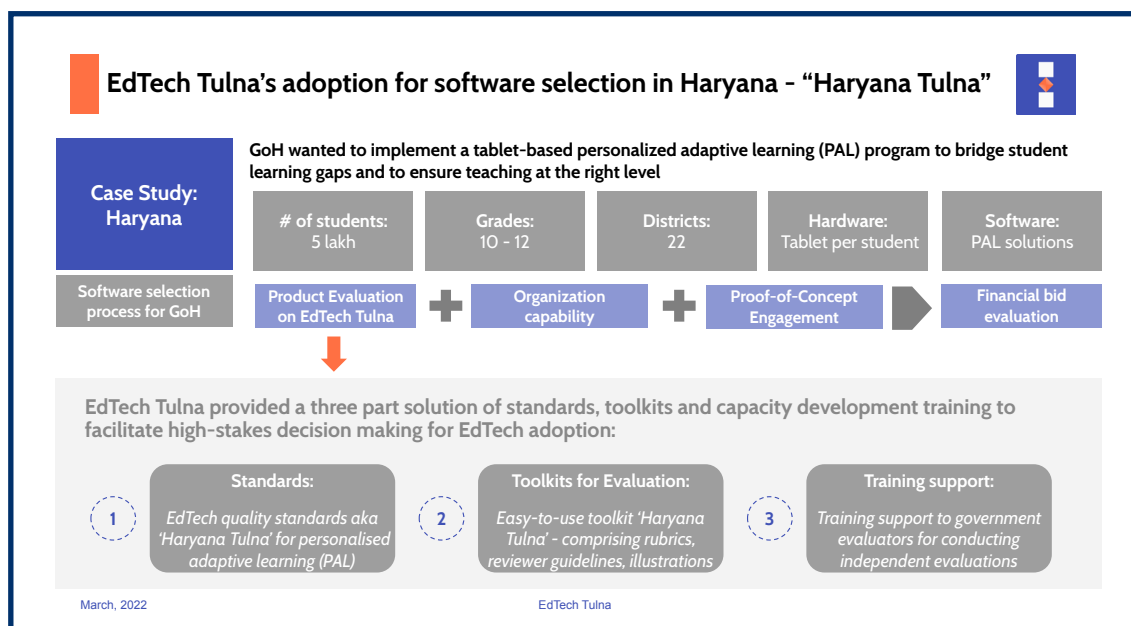
1. Contrary to common practice, the procurement of hardware and software were unbundled (separated), so that each service provider could be selected independently based on thorough evaluation of quality and contextual fit;
2. In the absence of substantial precedents for technical evaluation of software, the government

decided to institutionalize a new process for thorough checks and selection of the right solution, which embodies transparency and technical rigor;

3. A solid evidence-driven approach was taken for the selection of PAL solution comprising three steps:
 - Performance on the EdTech Tulna quality standards for PAL using contextualized toolkit ‘Haryana Tulna’, on criteria across content (*such as content accuracy and clarity, curriculum alignment*), pedagogy (*learner centricity, motivational features, adaptivity*) and technology (*intuitive use of interface design, universal design*)⁴;
 - Assessment of organizational capabilities such as past experience of working with governments;
 - Evaluation of suitability and efficacy for implementation in government schools via a 4- week proof-of-concept evaluation, to generate evidence on set-up and delivery systems, student and teacher engagement, and stakeholder feedback.

4. A robust scoring mechanism, developed to qualify only those bidders for financial evaluation, whose overall score on all three steps mentioned above met a minimum benchmark (cut-off) for quality.

Haryana Tulna, GoH’s customized Tulna toolkit comprising standards and rubrics for software evaluation, enabled the government in taking ownership of and running a robust procurement process that laid out the criteria for evaluation in the Request for Proposal (RfP). The attempt was to streamline the selection process by providing an understanding of **‘what good PAL looks like’** to both suppliers and evaluators. EdTech Tulna provided training and supported capacity building of the evaluation committee on using Haryana Tulna toolkits for making independent, evidence-based decisions. The technical evaluations were conducted by the evaluation committees mobilized by the state, comprising both state and private sector representation, who conducted closed evaluations to arrive at an independent decision for selection of quality software that was most suitable for states’ requirements.



The process was monitored closely at the highest level with the Director, Secondary Education, and other senior officials who actively ensured that evaluations were done in a scientific manner. The final scoring process was done independently to cement state agency and ownership.

Setting an example for selection of quality software

As a first and a bold mover, the Government of Haryana has demonstrated the importance of the quality of EdTech software and content in large-scale learning programs. It is therefore encouraging to see that EdTech Tulna has enabled the government in running an evidence-led selection process that focuses on the quality of the software. This is a promising first step in supporting the adoption of quality EdTech solutions as more states strive to deliver better learning resources for students and teachers.

References

- [1] EdTech Startups in India - [Traxcn](#)
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- [3] [Muralidharan, Karthik, Abhijeet Singh, and Alejandro J. Ganimian. 2019. "Disrupting Education? Experimental Evidence on Technology-Aided Instruction in India." American Economic Review, 109 \(4\): 1426-60.](#)
- [4] <https://edtechtulna.org/standards/>